



US006074307A

United States Patent [19][11] **Patent Number:** **6,074,307****Hettema et al.**[45] **Date of Patent:** **Jun. 13, 2000**[54] **SET TRANSFORMATION EFFECT**[75] Inventors: **Philip D. Hettema**, Los Angeles, Calif.;
William D. Mason, Orlando, Fla.[73] Assignee: **Universal City Studios, Inc.**, Universal
City, Calif.[21] Appl. No.: **09/229,528**[22] Filed: **Jan. 12, 1999**[51] **Int. Cl.**⁷ **A63J 1/02**[52] **U.S. Cl.** **472/77; 472/74**[58] **Field of Search** 472/77, 78, 80,
472/65, 136, 59, 74; 52/6, 7, 8, 9[56] **References Cited****U.S. PATENT DOCUMENTS**

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Primary Examiner—Kien T. Nguyen*Attorney, Agent, or Firm*—Lyon & Lyon LLP[57] **ABSTRACT**

An amusement attraction provides a set transformation effect. The audience watches a presentation in a viewing area. A moveable, open-bottomed flying set piece is located at a raised position above the viewing area. The flying set piece is hidden from the audience when the audience enters the viewing area. The flying set piece is attached to an overhead rigging system. A drive system lowers the flying set piece from the raised position above the viewing area to a lowered position such that the flying set piece surrounds the audience in the viewing area. The audience perceives that they have been transported back to different location within the attraction.

17 Claims, 9 Drawing Sheets